

APPROVED CAPTURE DRUGS AND DRUG ADMINISTERING EQUIPMENT

I. PURPOSE

This Directive sets forth capture drugs and drug administering equipment approved by the State Veterinarian for use in the capture of companion animals by animal wardens and other officers as defined in §3.1-796.66 of the Comprehensive Animal laws (i.e., Title 3.1, Chapter 27.4 of the Code of Virginia, 1950, as amended).

II. AUTHORITY

Title 3.1, Chapter 27.4, §3.1-796.119 of the Code of Virginia states, in part, "... All drugs and drug administering equipment used by animal control officers and other persons to capture companion animals pursuant to this chapter shall have been approved by the State Veterinarian."

III. APPROVED DRUGS

The following drugs are approved for use in the capture of companion animals only when (i) the drug is administered by individuals appropriately trained and competency-certified to humanely administer the drug; (ii) the drug is used only in a species in which the U. S. Department of Health and Human Services, Food and Drug Administration (FDA) has approved the drug for use; and (iii) the drug is administered via an approved route of administration and in accordance with the manufacturer's recommendations: (See Appendix A for further details.)

A. Acepromazine maleate

Administered orally (tablet form only), subcutaneously, intramuscularly, or intravenously. (See Appendix A for further details.)

DO NOT USE IN ANIMALS (ESPECIALLY CATS) POTENTIALLY EXPOSED TO ORGANOPHOSPHATES SUCH AS INSECTICIDES, DIPS, OR FLEA COLLARS BECAUSE THIS DRUG MAY POTENTIATE SUCH POISONS.

B. Xylazine hydrochloride (e.g. trade name Rompun)

Administered intramuscularly only. (See Appendix A for further details.)

C. Ketamine hydrochloride

Administered intramuscularly only.

NOTE: This drug is approved by the FDA for use only in cats and non-human primates. (See Appendix A for further details.)

D. Ketamine hydrochloride-Xylazine hydrochloride combination Administered intramuscularly only.

NOTE: This drug may be used in all carnivores. (See Appendix A for further details.)

E. Drugs and/or methods prescribed by a licensed veterinarian for use in the species involved, but ONLY if performed by or under the direct and immediate supervision of the licensed veterinarian so prescribing the method.

IV. APPROVED DRUG ADMINISTERING EQUIPMENT*

Equipment manufactured by the following named firms are approved for the humane capture of companion animals on the condition that:

- A. The users of the equipment are appropriately trained in the proper and humane use of the approved capture equipment;
- B. The users of the equipment follow the operating instructions prescribed by the manufacturer of the equipment;
- C. The equipment is well maintained and kept in a high state of repair at all times; and
- D. The animal is humanely captured.

CAP-CHUR Equipment
Palmer Chemical & Equipment Co., Inc.
P. O. Box 867, Palmer Village
Douglasville, GA 30133

SIMMONS Equipment
Zoolu Arms of Omaha
10315 Wright Street
Omaha, NE 68124

PNEU-DART Equipment
Pneu-Dart, Inc.
P.O. Box 1415
Williamsport, Pa 17703-1415

DIST-INJECT Equipment
Glasgow Veterinary Supply
Fort Peck Route
Glasgow, MT 59230

TELINJECT Equipment
Telinject, USA, Inc.
16133 Ventura Boulevard, Suite 635
Encino, CA 91436

PAXARMS Equipment
Telonics
932 East Impalla Avenue
Mesa, AZ 85204-6699

SHERIDAN Equipment
Benjamin Sheridan Corporation
Routes 5 & 20
East Bloomfield, NY 14443

***NOTE: THE STATE VETERINARIAN DOES NOT RECOMMEND THE EQUIPMENT PRODUCED BY ONE MANUFACTURER OVER THAT PRODUCED BY ANOTHER.**

V. WRITTEN PROTOCOL FOR ANIMAL HANDLING AND CARE POST CAPTURE

Persons approved to use capture equipment and drug-administering equipment must have a written post capture protocol, which will include:

- A. The procedure for removing the dart from a captured animal,
- B. First aid care of the dart wound,
- C. The procedure for providing veterinary care to the animal immediately upon capture, and
- D. Appropriate location and handling of the animal during recovery from anesthesia.

VI. APPROVAL OF ADDITIONAL DRUGS AND DRUG ADMINISTERING EQUIPMENT

The Office of the State Veterinarian will monitor advances in research relative to drugs and drug administering equipment for use in capturing companion animals on a continuing basis. Chemical restraint drugs (i.e., capture drugs) and drug administering equipment which are proven to be acceptable will be added to the approved list.

Firms or individuals seeking approval of specific drugs or drug administering equipment for use in capturing companion animals must submit a written request for the consideration of such proposals to:

State Veterinarian/Director
Division of Animal Industry Services
P. O. Box 1163
Richmond, VA 23218

Requests to deviate from, or to use an alternative to the approved drugs or drug administering equipment, must be sent in writing to the State Veterinarian at the above address. The request must include a detailed explanation of the proposed deviation or alternative, substantive justification for the request, substantive reasons why the currently approved drugs or drug administering equipment cannot be used, and how the proposed deviation or alternative will resolve the reasons/problems, and sufficient objective and supportable evidence that the proposed deviation or alternative is at least as humane as the currently approved drugs or drug administering equipment identified in this directive.

Reviewed and approved this 1st day of August 2001.

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William M. Sims, Jr., DVM, MS
State Veterinarian

Attachment: Appendix A

APPENDIX A

I. APPROVED DRUGS

APPROVED DRUG	APPROVED FOR	ROUTE OF ADMINISTRATION	DOSAGE
Acepromazine maleate	Dogs	Intra-muscular or subcutaneous	0.25 to 0.5 mg/lb.
		Orally	0.25 to 1 mg/lb.
	Cats	Intra-muscular or subcutaneous	0.5 to 1 mg/lb.
		Orally	0.5 to 1 mg/lb.
Xylazine hydrochloride	Dogs less than 50 lbs.	Intra-muscular or subcutaneous	1 mg./lb.*
	Dogs more than 50 lbs.	Intra-muscular	0.5 mg/lb.*
	Cats	Intra-muscular	1 mg/lb.
Ketamine hydrochloride	Cats	Intra-muscular	5 to 15 mg/lb.
	Non-human primates	Intra-muscular	3 to 15 mg/lb.
Ketamine HCL, Xylazine HCL, combination **	Carnivores	Intra-muscular	0.3 ml/10 lb.

*Species, routes and dosages approved by the FDA and listed in the manufacturer's recommendations.

See also Section IV. of Appendix A.

**Use of this drug must be under the general supervision of a licensed veterinarian.

II. COMPETENCY CERTIFICATION REQUIRED

- A. Any companion animal captured is only to be captured by a person or by persons that have been certified in writing by a Virginia-licensed veterinarian or other qualified individual as being properly trained and competent in the humane capture of animals by use of the specified approved capture drug(s) and equipment being used.
- B. See Appendices A. through H. of Division of Animal Industry Services Division Administration Directive 79-1 for competency certification requirements and competency certification forms.

III. ADMINISTRATION OF CAPTURE DRUGS

- A. Capture drugs are to be administered only by individuals that are appropriately trained and competency-certified to humanely use and administer the approved drug(s).
- B. Capture drugs are to be administered only in the species in which the FDA has approved the drug(s) for use.

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- C. Capture drugs are to be administered only when administered via an approved route of administration for the species being given the approved drug and in accordance with the manufacturer's recommendations.

IV. GENERAL CONSIDERATIONS

- A. If xylazine is to be given alone, the dosage and dose of the xylazine must be determined by a supervising, licensed veterinarian. As a rule, dogs weighing under 25 pounds should NOT be captured by chemical means using remote injection (e.g., by use of a dart gun).
- B. According to author Leon Nielson, in his book Chemical Immobilization in Urban Animal Control Work, "The dosage suggested...for the ketamine/xylazine combination of 5.0 mg of ketamine/kg* of body weight and 1.0 mg of xylazine/kg of body weight...for intramuscular injection in dogs only."

Nielson further states that,

"This regimen has produced immobilization (recumbency) in dogs in 2.6 – 3.6 minutes, with a recovery time of 131 and 110 minutes, respectively. The most practical way of preparing the mixture is to add 2 ml (200 mg) of xylazine to a 10 ml (1,000 mg) vial of ketamine. Testing has shown that this pre-mixed solution will remain stable with undiminished potency for 6 months. The dosage to use of the 5:1 combination is 6.0 mg/kg...."

The above dosage of the drug combination is calculated to be 0.027 ml per pound of body weight, or 0.81 ml per 30 pounds of body weight, using a 10% concentration of xylazine.

***Remember: 1.0 kilogram (1 kg) = 2.2 pounds.**

NOTE: Currently, ketamine hydrochloride has NOT been approved by the FDA for use in carnivores. Therefore, although the combination of xylazine and ketamine hydrochloride given at the dosages described above and using the appropriate drug administering equipment for the drug, animal and situation involved, is considered effective for use in the chemical capture of carnivores, the State Veterinarian can only acknowledge the effectiveness of this drug combination, but DOES NOT sanction the procurement or use of ketamine or any other drug in violation of state or federal law. Therefore, should this drug combination be used, it would be approved for use only if done under the lawful supervision of a licensed veterinarian.

- C. According to the Virginia Board of Pharmacy, §54-524.59 of the Code of Virginia authorizes animal wardens/animal control officers and law-enforcement officers "...in the employ of the United States government or of any state, territorial, district, county, municipal, or insular government..." to purchase, receive or possess any approved capture drug for use in the lawful capture of animals pursuant to Title 3.1, Chapter 27.4 of the Code of Virginia, "...by reason of his official duties."